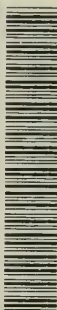


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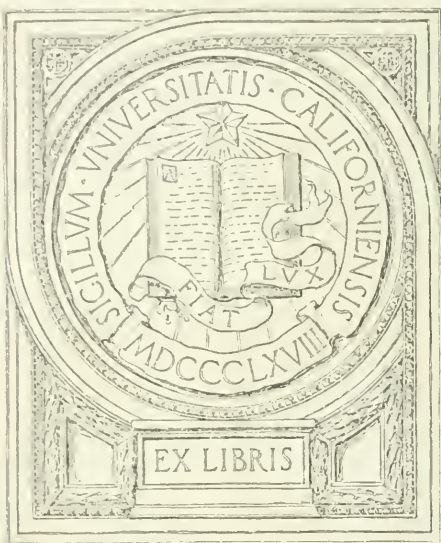


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BULLETIN NO. 7
BUREAU OF BUSINESS RESEARCH

HARVARD SYSTEM OF STOCK
KEEPING FOR SHOE
RETAILERS



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BULLETIN NO. 7
BUREAU OF BUSINESS RESEARCH

HARVARD SYSTEM OF STOCK
KEEPING FOR SHOE
RETAILERS



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HARVARD SYSTEM OF STOCK-KEEPING FOR SHOE RETAILERS

THIS bulletin provides a system of stock-keeping for shoe retailers. Its object is to enable shoe retailers to increase the rapidity of their stock-turn and to reduce losses from depreciation. This system is based upon the most modern methods of stock-keeping and embodies the best practice found by the Bureau in the retail shoe trade. Actual tests have shown that it is applicable to a shoe business of any size or grade.

In the retail shoe business, as in other retail businesses, a high annual stock-turn generally results in good profits and a low stock-turn frequently causes loss. In the figures collected by the Bureau from shoe retailers, which were summarized in Bulletin No. 1, stock-turn has been found to range from 1.0 to 3.6 times a year. The common figure is 1.8, but enough stores are turning their stock 2.5 times a year to indicate that the latter figure is one which can readily be attained by all retailers using proper stock-keeping methods. A high stock-turn is especially important in retail shoe stores for reducing loss from depreciation — a subject discussed at length in Bulletin No. 4, "Depreciation in the Retail Shoe Business."

The importance of a proper stock-keeping system arises from a few obvious facts — so obvious sometimes that the dealer fails to realize what bearing they have on the management and profits of his business. The demand upon a shoe retailer's stock is complicated by the diversity of sizes and widths and of grades and styles. The development of rights and lefts, different sizes, and varying widths has been due to natural causes. Fashion has caused still further diversifica-

60 pairs of shoes bought at \$2.75 a pair	\$165	
45 pairs of shoes sold at \$4 a pair	\$180	
15 pairs of shoes marked down to \$3.	45	225
Profit	\$60	26 $\frac{2}{3}$ %
Operating expense		25 %
Net profit		1 $\frac{2}{3}$ %

Three-fourths of the net profit has been lost in mark-downs due to "left-overs," "end-sizes," and style change. Such losses can be reduced by the use of an efficient stock-keeping system. Fortunately the high average unit of value permits an expense of recording which a smaller unit could not bear. A unit of \$3 to \$5 or more warrants a stock-keeping expense that one of 25 or 50 cents would not permit.

To aid in more accurate buying, an extensive use of averages has been made. Shoe manufacturers and wholesalers have prepared charts and "runs of sizes," based on their own experience, to guide the retailer in ordering. One important manufacturing company has prepared charts for men's shoes and for women's shoes, based on the sales of two million pairs in the United States. One of these charts is substantially as follows:

Width	4	4½	5	5½	6	6½	7	7½	8	8½	9	9½	10	10½	11	11½	12
AA						(3)						(2)		(3)			
A	(4)					(3)	(2)								(3)		
B					(2)				(1)					(2)	(3)		
C			(2)											(2)	(3)		
D	(3)															(4)	
E			(3)				(2)						(3)				
EE	(4)									(4)							

This is the chart for men's narrow toe shoes; there are three other charts — for men's broad toes, women's narrow toes, and women's broad toes. In each chart the area indicated by (1) represents 80 % of the total sales in the ordinary store;

area (2) represents 16 %, area (3) 3 %, and area (4) 1 % of the sales. The shape and the size of the areas differ on different charts. For example, in the charts for women's shoes the area marked (1) extends between 3 B-E, and 6½ A-E. There are also differences in the other areas but the above chart shows the general plan. These charts show that a retailer should buy with great caution sizes and widths outside the central space, area (1), and that even more caution should be exercised in buying in areas (3) and (4) than in area (2).

Another large manufacturing company has decided that no one general chart can be used for the United States, but that for each sex there should be at least three, each determined for a geographic location. This company advocates one chart for the southeast, one for the region west of the Mississippi, and one for the northeast. In its own investigations the Bureau has found great differences in the character of the demand within a single city. A shoe store located in the manufacturing district of a large city, where many foreigners are employed, cannot use the same chart as a store in a wealthy residential district.

Wholesalers supply standard "runs of sizes" to shoe retailers of which the four following may be taken as typical:

Men's	5	5½	6	6½	7	7½	8	8½	9	9½	10	10½	11
5-11.....	1	1	1	1	1	1	1	1	1	1	1	1	1
5-8.....	1	1	2	2	2	2	2						

(Twelve more "runs" range from 5-10 to 8-11)

Women's	2½	3	3½	4	4½	5	5½	6	6½	7	7½	8
2½-8.....	1	1	1	1	1	2	1	1	1	1		1
3-6.....		1	2	2	2	2	2	1				

(Sixteen more "runs" range from 2½-7 to 5-7)

Similar "runs" are provided for "Boys'," "Youths'," "Little Boys'," "Women's Low Heels," "Misses'," "Children's" and "Infants'." The examples given mean that for each dozen pairs ordered on a width, or not to run narrower than a certain width, the sizes shall be distributed as indicated, that is,

for a "run" of men's sizes between 5 and 8 for each dozen pairs there shall be but one pair 5's and one pair 5½'s and two pairs each of the remaining sizes.

There can be no question as to the service rendered to all members of the shoe trade by these charts based on general averages. At the same time they are undoubtedly of more service to the manufacturer or wholesaler who sells to a number of communities than to the retailer who sells in a single community. There are wide local variations in the demand for sizes and widths. As in qualities, this depends upon geographic location and upon the class of customers. The Bureau has coöperators in the retail shoe trade who seldom order a width narrower than a D, and it has others whose business would suffer had they not a liberal sprinkling of A's. The Bureau has charts of best sellers, constructed by a Chicago retailer for men's and women's shoes, which differ considerably from those referred to on pages 7 and 8.

It appears, therefore, that each shoe store has to determine its own selection of the styles, sizes, widths, and grades suited to its needs. In this it is aided in great measure by records of its own experience. Although experiments will still have to be made and risks taken if the business is to progress, as much risk as possible should be eliminated. Toward this end, among the most enlightened and successful shoe retailers, there is an increasing use of stock-keeping systems. These systems vary greatly in convenience and usefulness but probably any of them, if kept up faithfully, is much better than none. Even with the best system in use, there must remain some element of risk. The Bureau has coöperators with excellent stock-keeping systems who, even with frequent revisions of their own summaries, have occasionally met some unforeseen changes in the demand for sizes and widths as well as in styles. Nevertheless, without their systems they state that they would feel comparatively helpless and have a decidedly greater element of risk in their business. In ordering,

it is certainly much safer to confine guess-work to 10, 20, or even 30 % of the sales than to "estimate" the coming business as a whole from unrecorded experience.

The Harvard System of Stock-keeping for Shoe Retailers, provides forms for recording experience, in order to keep the stock "clean," free from "end-sizes" and "left-overs." This system is the result of a careful study of stock-keeping methods in retail shoe stores and in other businesses. Based on practice, it has been thoroughly tested and found applicable to shoe businesses large and small, general and specialized, with popular prices and with high prices. The general plan and spacings of these sheets have been carefully tested by a special inquiry into the experience of over one hundred of the Bureau's coöperators, selected to represent various kinds and sizes of shoe businesses in different sections of the United States and Canada.

As a preliminary to the detailed explanation of the stock-keeping system a few definitions are needed. Such words as "last," "line," "style," "grade," have repeatedly been found by the Bureau to be used in different senses, dependent upon whether the speaker is a retailer, a traveler, a manufacturer, or a wholesaler. For its own purposes the Bureau has found it necessary to standardize definitions for a few of these words, and in doing so has naturally endeavored to follow what it believes the best practice. Some of these definitions are:

Grade is determined by the retail selling price.

Kind indicates the sex and age, that is, men's, women's, youths', misses', boys', children's, and infants' shoes.

Last is the form or pattern on which the shoe is built and may be the basis of several styles (see *Line* and *Style*).

Line is a term which is loosely used, with so many varying meanings that it cannot be precisely defined. Perhaps most frequently a "line" contains only one grade, but it may contain more. Examples are: Four dollar men's Oxfords; three dollar women's

high; also a "line" of men's Oxford tans with ranging grades. The term is also sometimes confused with "make" (see Make).

Make is the name of the manufacturer — with the location of the factory, if there is more than one.

Size is length, indicated by figures.

Stock Number designates all those shoes which differ only in size and width, and have all other characteristics in common. Stock number and style (see Style) are frequently synonymous but not necessarily, for example, a slight difference in the stitching or lace eyelets and catches might warrant a different stock number on really the same style. It is always safe to refer to a style as covering at least one stock number but not vice versa. Style is more inclusive. Even though stock numbers are changed, while a "stock number" stands it is more specific than "style."

Style is the cut (following broad lines and not noting extreme refinements — see Stock Number), the color, and the material. Examples are: Oxford, Balmoral, Blucher, button, black, tan, patent, cloth-top.

Width is breadth, usually expressed in letters. The Bureau always expresses it in this way.

EXPLANATION OF THE

HARVARD SYSTEM OF STOCK-KEEPING FOR SHOE RETAILERS

The Harvard System of Stock-keeping for Shoe Retailers records, in logical and compact form, size-ups and orders by styles, sizes, and widths, and receipts and sales by styles, so that the proprietor or manager can tell at any time the condition of his stock — what portions are moving and what are not moving. The system comprises the following forms:

Sales Summary Sheet (Form 7a).

Size-up Sheet (Form 7b).

Consolidation Sheet (Form 7c).

containing — Order Record.

Record of Receipts.




Stock Record.

Samples of these forms accompany this bulletin. Additional copies may be obtained at cost from the Bureau.

On the Sales Summary Sheet (Form 7a) by means of a daily tally, a record by stock numbers is kept of the number of pairs of shoes sold and the number of pairs returned. One sheet has space for recording, without reference to size and width, the sales and returns of each of one hundred stock numbers for four weeks. This record shows how rapidly each style is being sold. On the Size-up Sheet (Form 7b) the number of pairs of each size and width on hand is entered for each stock number — one sheet for each stock number. Spaces are also provided on the Size-up Sheet for number of pairs on order and number of pairs due for each size and width. The number of pairs on hand is determined by actual count; the figures for the number of pairs on order and for the number of pairs due are obtained from the Order Record. The Consolidation Sheet (Form 7c) consists of three parts — Order Record, Record of Receipts, and a summary Stock Record. One sheet is used for a single stock number. On the Order Record is entered the number of pairs of each size and width to be ordered, as determined for each order by reference to the Sales Summary Sheet and the Size-up Sheet. The Record of Receipts is filled out from order blanks and invoices of goods purchased. The Stock Record on the same sheet provides a monthly summary of goods received, sales, and returns.

The detailed explanation of this stock-keeping system should begin with the Sales Summary Sheet (Form 7a) — the first of the three sheets referred to above. A portion of the Sales Summary Sheet is shown on the opposite page for purposes of illustration. Each Sales Summary Sheet shows at a glance the best selling and the poorest selling stock numbers. On it are recorded the sales and returns of 100 stock numbers for four weeks, with daily entries and weekly totals. On each side of the heavy double line in the centre of the sheet spaces

are provided for 50 stock numbers—one stock number to a line. In the column at the extreme left, headed “Stock Number,” the stock numbers are entered, one stock number on each line. In the weekly divisions, four in number, the records of sales and returns of these stock numbers are kept.

Each weekly space, headed “Week Ending,” is divided into four columns. The first two of these columns are for “Sales” and the last two columns are for “Returns.” In the first of the “Sales” columns, headed “Tally,” sales of the corresponding stock number are tallied  daily. To tally, a vertical mark is drawn for each pair of shoes up to four, as follows , and for the fifth pair sold a cross mark is drawn diagonally through the four vertical marks, thus . This tally is repeated for each five pairs sold. At the end of each week the tallies for the week are counted and the total sales for that stock number for that week are entered in the second sales column, headed “Total.”

There are two columns for “Returns” in each weekly division of the Sales Summary Sheet. “Returns,” as here used, means unworn shoes which are returned and which can again be placed in the stock for sale. In the first of the “Returns” columns, headed “Tally,” the number of pairs of shoes returned are tallied for each stock number in the same manner as sales. In the second “Returns” column, headed “Total,” the totals of the tallies of returns of the respective stock numbers for the week are entered. Each weekly section is used in the same way. At the end of each week the figure for “Total Sales” for the week as recorded on the Sales Summary Sheet is entered also on the Stock Record of the Consolidation Sheet (Form 7c) bearing the same stock number. At the end of each month, the total number of pairs of shoes of each stock number returned during the month is deter-

mined from the record on the Sales Summary Sheet and entered upon the Stock Record of the Consolidation Sheet.

It may be asked why the Sales Summary Sheet was not constructed for months instead of for four-week periods so that it would compare exactly with this monthly Stock Record. It was purposely decided not to construct it so, for no broken weeks were wanted on the Sales Summary Sheet. Since the entries on it are daily, the broken weeks of the Stock Record can be readily supplied by counting the tallies up to and including the last day of the month, no matter when in the week that day comes. Under this method the Stock Record by whole months is supplied and the totals of the Sales Summary Sheet for whole weeks are not disturbed.

The stock numbers at the left on the Sales Summary Sheet may be entered in advance or only as sold, depending on the nature of the individual shoe business. If the business carries a comparatively few (20-30) active stock numbers, it may be easier to have them all entered in advance in the order that has become customary. If the business has many stock numbers of varying activity, it may be easier to enter numbers as sold letting the order of their sale determine their places on each sheet. Each retailer can decide for himself which method he prefers. It is advisable to keep separate the sales of men's, women's, and others, whether in separate groups on the same sheet or on separate sheets. One sheet at a time will be more than sufficient for many shoe stores. Two sheets will be ample for the great majority of shoe stores. Tests have shown that not more than ten minutes a day on the average should be required to keep this sheet for retail shoe stores with yearly sales not exceeding \$50,000. The time required for larger businesses will increase in approximate proportion.

The next form of the Harvard System of Stock-keeping for Shoe Retailers is the Size-up Sheet (Form 7b). From its

investigations the Bureau has concluded that only an extremely small fraction (probably less than 5 %) of the retailers employing a continuous inventory depend wholly upon it for the ordering of sizes and widths. By far the greater portion rely instead on a "size-up" — an actual physical count of sizes and widths on hand. In this conclusion, the Bureau is supported by the observations of manufacturers and wholesalers who have been particularly interested in this matter.

Theoretically, it should be possible and it would seem desirable to have a stock-keeping system so detailed and so accurately kept that orders might be determined not only by number but also by size and width without the aid of a size-up. In practice, however, it appears that, owing to carelessness, rush hours, and part-time salespersons, incorrect memoranda creep into the sales slips and affect the accuracy of stock records made up from them. An error or two of this kind, owing to the high average unit of value of shoes already referred to (pages 6 and 7), will counterbalance the expense of taking a size-up which shows exactly what is on hand. The Bureau believes, however, that this difficulty can be overcome to a large extent through a system of bonuses for errorless days for salespersons (see page 36). Another objection to a system which records sales by styles and widths is weightier; it makes the system unwieldy. The omission of such a record does not impair the chief usefulness of the system. The main service of a shoe stock-keeping system is to show what numbers and styles ¹ are moving and especially to show the tendency of the movement to increase or decrease. A record of *styles as sold in the order of their importance rather than of sizes and widths sold* is the central idea of a stock-keeping system. The size-up, sure to be taken, will show sizes and widths on hand. A comparison of this with previous on hands and receipts furnishes the sales by sizes

¹ These are frequently coincident but not always — see definition of Stock Number, p. 11.

and widths with accuracy. Accordingly the Bureau soon reached the decision that it would be impracticable to abandon the size-up and that any stock-keeping system which attempted to reckon without it would be cumbersome and not materially improved. Consequently, the size-up was accepted as a fact and it has been incorporated as an integral part of the Harvard System of Stock-keeping for Shoe Retailers. The second sheet (Form 7b), which appears on the following page, is the Size-up Sheet.

The ordinary size-up sheet, so well known to the shoe trade, consists simply of squares as follows, dashes usually being employed to represent the half sizes; for example, 5, —, 6 means 5, $5\frac{1}{2}$, 6:

	5	—	6	—	7	—	8	—	9	—	10	—
AA												
A												
B												
C												
D												
E												
EE												

The Bureau's Size-up Sheet (Form 7b), a copy of which is reproduced on the following page, does not differ from this except that each square has three divisions. If only the

SIZE-UP SHEET

KEY

1. On hand.
2. On order.
3. Due.

1	
2	3

upper spaces, marked 1 in the key, are used, this Size-up Sheet does not differ from an ordinary size-up sheet — the number of pairs of each size and width on hand as determined by actual count is entered in its proper space. The use of the additional spaces is optional. If used, space 2 can be employed to show the number of pairs *on order*, that is, the pairs ordered but not yet received of that particular size and

width. This figure, as well as that for pairs due, is taken from the Order Record, to be described later. Space 3 can be used to show *pairs due*, or pairs transferred from another stock number, or for other data as desired.

The Size-up Sheet is constructed so as to bring together in a useful place important facts about a single stock number. To avoid duplication of work, as soon as the size-up is taken, the Size-up Sheet should be attached with clips to the Consolidation Sheet (Form 7c) having the same stock number. There it remains until the next size-up on that particular stock number is taken, when it is to be removed, destroyed or filed, and the new Size-up Sheet substituted for it. The latest Size-up Sheet is thus always attached to the Consolidation Sheet for the corresponding stock number, so that from it may be seen at a glance all the essential facts in the history of that style up to the time of the last size-up. In order to learn whether or not stock is accumulating, the figures on the last Size-up Sheet should always be compared with those on the Size-up Sheet which is removed. These facts guide the retailer in determining new orders to be given.

The Consolidation Sheet (Form 7c), as its name indicates, consolidates three records—orders, receipts, and stock. Like the Size-up Sheet, the Consolidation Sheet relates to one stock number only, as indicated in the upper right-hand corner. At the top is also given a full description of the shoe corresponding to the stock number, together with its make, selling price, billed cost, profit, and discount. The Order Record, which is the first part of the Consolidation Sheet to be used, provides spaces for recording by pairs as many as sixteen separate orders for each style and width¹ as deter-

¹ Only the widths are printed on the blank form, the top spaces for sizes as in the Size-up Sheet being left for insertion by the user according to the nature of the shoe, whether men's, women's, children's, and according to whether there is an extended or concentrated range of sizes. To provide printed sizes for all these conditions would make the sheet much longer and hence more cumbersome and leave much waste

mined from the Size-up Sheet and Sales Summary Sheet. A section of the Order Record is shown on the opposite page. The orders are recorded in the squares as indicated in the key, the spaces corresponding to the first, second, third,

CONSOLIDATION SHEET

KEY

1-16. Orders.

I. On hand at beginning.

II. Total bought.

III. On hand at end.

IV. Sales.

1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16
I	II	III	IV

fourth orders respectively, and so on for the whole sixteen, if used.

Note carefully that this Order Record is the *basis* from which order blanks are filled and given to the manufacturer or wholesaler. The entries on the Order Record are determined from a study of the Size-up Sheet, the Sales Summary Sheet, and the Stock Record. These entries are made to guide the retailer in giving his orders. Consequently, the Order Record is *not* to be filled from order blanks but order blanks are to be filled from it. As an order blank is filled from the Order Record it will be well to

avoid future confusion by putting a circle or parenthesis around each entry as soon as the order has been sent in and to cross the spaces not used. In the example given here it would be clear that the pairs

(5)	×	(1)	

decided upon at the first and third orders had been ordered from spaces 1 and 3, that none of that size and width was

space. After diligent inquiry sixteen was selected for the number of spaces as an outside figure to cover the orders given in a year on any stock number. When, under exceptional conditions, it should be exceeded, a second Consolidation Sheet can be started for that particular stock number and attached to the first. Many shoe retailers, however, will not require half of these spaces.

needed on the second order, consequently space 2 was crossed because not used, and that the next order would be from space 4.

The spaces in the lowest row in each section furnish important summary figures for each size and width of that particular stock number and are to be filled out as follows:

- I. Number of pairs on hand at beginning of year.
- II. Number of pairs bought.
- III. Number of pairs on hand at end of year.
- IV. Sales.

The first space (I) is for the number of pairs on hand at the beginning of the fiscal year at inventory. It may be well to enter this in red. If the system is installed between inventories the number entered here will be the first size-up, and at the next inventory a new sheet can be started, since it is decidedly convenient to have the Consolidation Sheets coincide with the inventory periods. With the commendable growing practice in the retail shoe trade of taking an inventory every six months, each Consolidation Sheet, constructed for one year, would cover two fiscal periods. At the middle inventory, that is, at the end of the first six-month period, as a memorandum a figure may be entered in red in a corner of space I, if desired. The next space (II) is for the sum of all the figures in the spaces 1-16, representing the total pairs bought of that size and width during the year. The space (III) is for the number of pairs of shoes on hand at the end the year, as shown by the last Size-up Sheet. The last space (IV) gives the sales for that size and width for the year. This figure is obtained by deducting the figure in the third space (III) from the sum of the figures in the first two spaces (I + II). If any shoes have been entered as ordered but not received, the number of pairs not received should, of course, also be deducted.

This summary is especially important for determining which sizes and widths were purchased in too great quantity during the year. Reference to the record of the individual orders will show which order was too large. These facts furnish a guide for purchases in future seasons. Whenever it is desired during the year to compare sales, orders, and stock by sizes and widths, the figures can be obtained from this Order Record and the Size-up Sheet. The sales are determined by subtracting from the sum of the number of pairs on hand at beginning and the number of pairs ordered, the sum of the number of pairs on order and the number of pairs on hand at the last size-up. The Bureau recommends frequent comparisons of this sort in order that the retailer may learn promptly whether or not all of his stock is moving with sufficient rapidity.

The Record of Receipts, in the lower left-hand corner of of the Consolidation Sheet, is a concise record of the necessary facts about the receipts of goods ordered. A copy of half of the Record of Receipts is shown on page 25. When was each order on the Order Record given? What delivery date was promised? When did receipts begin? How many separate receipts were there before the order was completely filled and how many pairs, if any, were yet to come after each receipt? These are questions answered by the Record of Receipts. Provision is made on the Record of Receipts for sixteen orders, to correspond to the sixteen spaces above in the Order Record. There are no entries for sizes and widths. The total number of pairs of the first order should be the sum of the "1" spaces for all sizes and widths in the Order Record above. The second and third orders should be the sum of the "2" and "3" spaces respectively in that record and so on with the remaining thirteen, if that number of orders is required.

The record for each order is as follows:

Order No.	Date of Order	No. Pairs	Delivery Date	RECEIPTS				
				Date				
				Prs. Rec'd				
				Prs. Due				

At the left, the number of the order, as shown by the order blank, is entered. In the second column is entered the date when the order was given. In the third column — “No. Pairs” — is entered the total number of pairs on the order; as just explained, this is the sum of the entries in the spaces in the Order Record above corresponding to this order. Under “Delivery Date” is entered the date of delivery specified or promised by the wholesaler or manufacturer. These facts are all determined from the Order Record or from the order blank.

Under “Receipts” four columns are provided for recording as many as four receipts upon a single order. On the top line of the first “Receipts” column the date is entered on which the first shipment on the order is received. On the second line in the same column the number of pairs received in the first shipment is entered. This number is subtracted from the total number of pairs ordered, as previously entered, to show the number of pairs due. This figure for “Pairs Due” is entered on the third line. The second “Receipts” column is used similarly for a record of the second shipment received on the order; in the third and fourth columns the third and fourth shipments are likewise recorded. If the entire order is filled in one shipment, of course only the first “Receipts” column is used for that order. The receipts on each of the sixteen orders are recorded in the same manner.

Note carefully that just as the order blanks are to be filled from the Order Record, so the first four columns on the Record of Receipts are to be filled from the order blanks, original or

Order No.	Date of Order	No. Pairs	Delivery Date	RECEIPTS				
				Date				
				Prs. Rec'd				
				Prs. Due				
				Date				
				Prs. Rec'd				
				Prs. Due				
				Date				
				Prs. Rec'd				
				Prs. Due				
				Date				
				Prs. Rec'd				
				Prs. Due				
				Date				
				Prs. Rec'd				
				Prs. Due				
				Date				
				Prs. Rec'd				
				Prs. Due				
				Date				
				Prs. Rec'd				
				Prs. Due				

ILLUSTRATION OF A PORTION OF RECORD OF RECEIPTS,
 CONSOLIDATION SHEET (FORM 7c)
 Harvard System of Stock-keeping for Shoe Retailers

carbons,¹ and never from the Order Record directly. The Record of Receipts is to be filled *after* the order form is filled and *not before*. Those who follow these instructions will save themselves avoidable, inconvenient, and expensive errors.

¹ The Bureau recommends, even though the carbon is presumably identical, that the entries be made from the original before it is sent to the manufacturer or wholesaler. This not only makes more certain the accuracy of the Record of Receipts but it insures its being kept up-to-date and serves as an additional check on the carbon which is used to note receipts.

Not only is it much easier to enter from the filled out order than to skip spaces and add figures in the Order Record but if the "Receipts" section is to be of service, it is also absolutely necessary for the Record of Receipts to correspond *exactly* in pairs ordered with the actual order given to the manufacturer or wholesaler. The percentage of error is bound to be less if the Record of Receipts is filled directly from the order placed rather than from the Order Record, even though the order was itself originally determined from the Order Record.¹

Last on the Consolidation Sheet is the Stock Record, which without regard to sizes and widths shows by months and weeks for a year the receipts, sales, and returns of the stock number under consideration. A copy of the Stock Record is shown on the opposite page. This record furnishes the all-important information of the *tendency* of sales and stock of this style to increase or decrease. By assembling the facts for convenient periods so that they can be easily compared, the Stock Record gives a valuable guide for buying. For example, at any size-up a shoe retailer might find his stock on a common size and width to be the same as the original "On Hand" — no greater and no less. Whether he should reduce or increase his stock in this size and width of this stock number would probably depend on what the Stock Record showed him about the sales of that stock number in all sizes and widths. It would depend upon whether total sales for the last few months were declining or increasing and also upon the time to elapse before the end of the season. If the height of the season has passed the retailer should be extremely cautious in giving new orders for seasonal goods.

The operation of the Stock Record is apparent; one column is provided for each of the twelve months. The first item,

¹ Occasionally an order cannot be completely filled and is cancelled short. In such cases the proper change should be made on the Record of Receipts not by erasing but by crossing the old figures and inserting the new — so as to show just what change was made.

	Month	Month	Month	Month	Month	Month	Month	Month	Month	Month	Month	Month	Month	Month	Month	Month	Month	Month	Month	Month
ON HAND																				
WEEKLY RECEIPTS (Pairs)																				
Total Receipts — Month																				
Returns (Pairs)																				
Total On Hand, Receipts, and Returns																				
WEEKLY SALES (Pairs)																				
Total Sales — Month																				
Total Sales to Date																				

STOCK RECORD, CONSOLIDATION SHEET (Form 7c)
Harvard System of Stock-keeping for Shoe Retailers

"On Hand," in each column is the quantity on hand at the first of each month. For the first month and usually for the seventh month it would be the inventory, in number of pairs, at the beginning of the year or period. It should, of course, in theory equal the sum of the "On Hands" in the Order Record for the corresponding date, but in practice there may be discrepancies (see page 31). The next five spaces in the column are for the "Weekly Receipts" of shoes by pairs. Five spaces allow for complete weeks and the part or parts of weeks completing the month. The Receipts spaces can be readily filled from the Record of Receipts at the left of the Consolidation Sheet. The total of receipts on dates falling in the given week will be the Receipts entry for that week in the Stock Record. The next item is the Total Receipts for the month, the sum of the five weekly entries above.

In the space next below — "Returns" — the total number of pairs of this stock number returned during the month is entered. This figure is brought from the Sales Summary Sheet as explained on page 13. Since the returns of each stock number will ordinarily be small, space is provided on the Stock Record only for the monthly total of Returns.

For this stock number the total number of pairs of shoes available for sale during the month is the sum of the number of pairs On Hand at the beginning of the month, the Total Receipts, and the Total Returns. This sum is entered in the space designated on the Stock Record.

For "Weekly Sales" five spaces are provided, as for Weekly Receipts — one space for each weekly total of sales as recorded on the Sales Summary Sheet (page 13). As previously explained the figure for the incomplete week which makes up the total for the month, in addition to the four full weeks, is obtained by counting the tallies of the sales for the days in the part of the week at the beginning or ending of the month. The sum of the weekly totals for sales is entered in the space designated — "Total Sales — Month."

“ Total Sales to Date,” the last space on the Stock Record, is for the sum of the monthly totals. At the end of the second month, for example, the Total Sales for that month are added to the Total Sales for the first month and the sum entered as “ Total Sales to Date.” Thus this cumulative total always gives the “ Total Sales to Date,” including the sales for all the months in the year to date. Each monthly column in the Stock Record is used in the same manner.

The On Hand at the beginning of the second month is found by subtracting “ Total Sales — Month ” of first month from “ Total On Hand, Receipts, and Returns ” of first month. If at any time net sales of shoes are wanted, “ Returns ” should be deducted from “ Total Sales — Month.”

With this general explanation of the three sheets of the Harvard System of Stock-keeping for Shoe Retailers a summary of the working of the system as a whole can be given. The Sales Summary Sheet (Form 7a) is the starting point. Inspection of it shows where size-ups should be taken. The record on the Sales Summary Sheet indicates the fastest selling stock numbers, which should be inspected to see how the sizes and widths are holding out and what “ fill-ins ” are necessary. It also indicates the slowest selling stock numbers for which it is desired to know how many sizes are likely to be “ left-overs.” These two classes demand attention first; size-ups of the normally selling stock numbers will be taken in the ordinary routine.

As soon as it has been determined what stock numbers should be sized-up, the Size-up Sheet (Form 7b) — one sheet for each stock number — is brought into use. This is filled from an exact count of shoes in stock. The upper spaces are filled like any size-up sheet with tallies of figures for the pairs on hand. Reference to the order carbon enables “ Pairs on Order ” and “ Pairs Due ” to be inserted in the lower spaces of the Size-up Sheet. The method of obtaining this information from order carbons will be discussed later. The Size-up

Sheets are then attached with clips to their respective Consolidation Sheets (Form 7c). For every stock number there is a Consolidation Sheet that bears that number and to which the Size-up Sheet with the corresponding stock number should be attached.

The Order Record of the Consolidation Sheet is next used. The person buying will first compare the previous Size-up Sheet with the last Size-up Sheet just attached to see whether stock of the respective sizes and widths is increasing, running even, or decreasing. He notes also the lower right-hand spaces of the Size-up Sheet to see what pairs are due. Glancing at the Record of Receipts in the lower left-hand corner of the Consolidation Sheet, he learns how promptly deliveries have been made in the past and what deliveries may be lacking. Finally the Stock Record in the lower right-hand section of the Consolidation Sheet shows the all-important tendency of sales for this stock number¹ — whether increasing, declining, or continuing at about the same volume. On the basis of these facts a buying decision is reached and the figures for the orders decided upon are entered in the proper spaces of the Order Record. Spaces not used are crossed. The order for the manufacturer or wholesaler is then made out.

The usual order blank is similar to a size-up form with proper headings and at least one carbon. This order blank is ruled so that it can be made out readily from the Order Record by sizes and widths. The total number of pairs it represents, its date and the expected date of delivery will be entered on the Record of Receipts below. As the order blank is made out, circles are drawn around the spaces in the Order Record as explained on page 21. The original of the order goes to the manufacturer or wholesaler and the carbon is

¹ It might be noted again that the information on the Order Record is by sizes and widths, while that on the Record of Receipts and Stock Record is for numbers only, all sizes and widths being thrown together. This is the result of testing to find where size and width data are most useful and where least required or not worth the trouble of getting.

retained by the retailer on which receipts are checked and from which they are entered on the Record of Receipts. When the shoes are sold, the sales figures are entered on the Sales Summary Sheet. Finally, at the end of each week, the Stock Record is brought down to date and the records are complete. The Bureau believes that in this procedure not an unnecessary entry has been made or a necessary entry omitted, and a stock-keeping system is provided which it pays the shoe retailer to use.

At inventory time the accuracy with which the records have been kept can be checked up by comparing the "On Hands" of the Stock Record with the actual inventory, and by comparing the sum of the "Sales" spaces (IV) in the Order Record with the Total Sales to Date of the Stock Record minus the total Returns. Some discrepancies are likely to be found, due possibly to theft, of which many shoe retailers complain, and due in part to the fact that errors inevitably creep into any records which are not frequently checked and balanced. In the Harvard System of Stock-keeping for Shoe Retailers, if the errors are small, it may not be worth while to trace them down, but efforts should be made to prevent their recurrence. So far as compensating errors have been made, differences between the recorded "On Hand" and the actual counts on one sheet will be offset by differences on the opposite side on other sheets, and the Stock Records as a whole and the inventories as a whole will check. Mistakes may be made in size and width but should not occur in number of pairs; the "overs" and "shorts" should be equal. Exact agreement between them, however, is not absolutely necessary. If errors are infrequent, although not entirely eliminated, the stock-keeping system gives running information of sufficient accuracy and of great aid while the size-ups give the precise information most needed.

A few suggestions about the installation and operation of the system may be of assistance. The best time to begin the

use of the system is at inventory time. Then the records on the Consolidation Sheet (Form 7c) will coincide with the inventory period or periods of the business and the "On Hands" will be those of inventory. It is by no means imperative, however, that an inventory be waited for. Probably the next best time to start is on the first of a month, which gives records for unbroken months on the Stock Record. If started between inventories the system will become distinctly useful before the next inventory, especially if aided by a general size-up taken at its introduction. The Bureau doubts the advisability of trying to fill in the sheets from old records, but recommends beginning with the current business — a clean slate. For a time, until the new sheets accumulate data, the old records will have to be relied upon. This is especially true in using the Order Record of the Consolidation Sheet. It seems wise to use the old records directly rather than to trouble to transfer them, since in a short time the new sheets will contain the vital facts.

Daily entries are required only on the Sales Summary Sheet (Form 7a) but it is urged that the other sheets be taken care of regularly. One of the chief benefits of a stock-keeping system is lost if it is not kept up to date. Furthermore, records easily kept with but a few minutes' attention each day become burdensome if allowed to accumulate and are apt to be neglected. The manager of a shoe store soon learns the rush and quiet business hours. During the quiet hours the necessary routine work such as receiving and sizing-up is carried on. If a certain portion of that time, say the first or second half-hour or hour in the morning, is set aside for entering the preceding day's receipts and sales of shoes, it will soon become habitual and there can be no question that it pays.

Though the system itself is equally applicable to all sizes of businesses, the arrangements for keeping it may vary according to the volume of sales. In a small shoe store

(employing not more than 2 or 3 persons including the proprietor or partners, with yearly sales ranging from \$12,000 to \$30,000) the proprietor himself may do all the work of sizing-up and stock-keeping. It is advantageous for the proprietor of a shoe business of this size to do all of this work himself since in no other way can he acquire so much valuable information about the state of his stock in so short a time. If the proprietor does not take the size-ups and keep the stock records himself, the sizing-up should be done by one person and the keeping of the other stock records by another. This will afford a check upon losses. The proprietor will find it advisable to size-up his stock personally from time to time in order to check the accuracy of previous records.

In a medium-sized shoe store (employing 4 to 6 persons, with yearly sales of from \$40,000 to \$60,000) the proprietor or a partner does the buying, but the sizing-up, receiving, and stock-keeping may be done by employees. Frequently an employee who is responsible and accurate and therefore well fitted for keeping stock records is not the salesman selling most; consequently, he can be employed on the stock records without diverting the most valuable selling time. If the store is departmentalized between men's, women's, and children's shoes, there can be one person in each department to size-up. Whatever the arrangement for sizing-up, the entries on the other sheets of the stock-keeping system should be made by one person only, but not by the person who takes the size-up. By having one person keep the stock records, facility, accuracy, and uniformity of entries are obtained and responsibility is fixed. By having the size-up taken by another person, a check upon the accuracy of the records is secured.

In a large shoe business (employing 10 persons and more with sales ranging from \$100,000 to \$1,000,000) specialization is necessary. The stock will be sized-up in divisions with one person to each division. There will be a buyer or buyers, a receiving clerk or force, and a stock-keeper. Usually there

will be a store-room ¹ as an immediate reserve for the selling floor or floors. Size-up Sheets will be turned in daily for various stock numbers and at once attached by the stock-keeper to their respective Consolidation Sheets; to these also are attached the last Size-up Sheets. These combined sheets are laid on the buyer's desk. He may note an order on the Buying Record, or he may lay the sheet aside for the time. Those sheets to be used for ordering are laid in a pile for the order clerk, who may or may not be the stock-keeper, according to the magnitude of the business. He fills the order blanks and turns them over, together with the Consolidation Sheets to the stock-keeper who makes the necessary entires on the Record of Receipts of the Consolidation Sheet and destroys or files the Size-up Sheet just preceding the last one. Meanwhile, the receiving clerk has been checking receipts on order carbons or making daily memoranda of the pairs received by numbers for the stock-keeper. The sales, however transmitted (see pages 35-36), are coming in constantly from the floor.

The Bureau believes that sizing-up should be a daily process for some portion of the stock. What part of the stock this is, the other sheets, especially the Sales Summary Sheet, will show. Though some portions of the stock should be sized-up more frequently than others, the Bureau believes that the whole stock of a retail shoe business should be covered by at least one size-up every two weeks. If attempted as a

¹ This may involve a separate store-room record showing: On Hand, Receipts, and To Floor. If so, the Size-up Sheets will be for the floor only and account will have to be taken of the store-room record. If, however, the store-room merchandise is kept in regular multiples by racks convenient to note, the size-up can include the store-room as well as the floor. After investigation and consideration the Bureau has provided no store-room record; in each case the advisability of having such a record will be determined by the conditions governing the individual shoe business. Such a record, if kept, will be a memorandum in addition to the Harvard System of Stock-keeping for Shoe Retailers.

general size-up on a certain day in each fortnight it would be a task indeed, but done each day, stock number by stock number or line by line, it becomes an important but not burdensome part of the daily routine.

The method of securing entries of the sales on the Sales Summary Sheet the Bureau has left to the preference of the individual shoe retailer. The usual way is from the carbon of the sales slip on which the salesperson has entered the stock number, size, and width, as well as the price of the shoe. As has already been noted (page 16), under this method there is a tendency toward errors due especially to rush hours and the employment of extra salespersons. To avoid these errors some dealers have used tags, about 2 x 4½ inches gummed at one end. When the shoes are received, the proper stock numbers are entered on the tags which are attached to the carton. The loose end is to be torn off and turned in with the sales slip¹ when the shoes are sold. It is doubtless true that the entry on the tag made at the receipt of the shoe with ample time and no distraction is apt to be more accurate than the entry on the sales slip during the rush of selling. The following difficulties with the tag system have, however, been reported. The salesperson and the wrapper, if there is one, must remember the tag as well as the slip. Even greater care must be exercised to make sure that shoes shown but not sold are returned to their proper cartons. New tags have to be prepared for shoes returned.

Because of these difficulties and also for the following reasons the Bureau is inclined to recommend adherence to a carbon of the sales slip as a means for transferring sales to the Sales Summary Sheet (Form 7a). First, the Sales Summary Sheet does not require a size and width entry but sim-

¹ Where there is a store-room the tag is in duplicate, that is, perforated in the center. The first half is torn off when the shoes go to the floor and the second when they are sold. To permit rapid assorting the tags should have distinctive colors according to the kind of shoe — men's, women's, children's.

ply the entry of the stock number of the shoe. This fact lessens somewhat both the demands on the salesperson and the chance of error. As already explained, the Size-up Sheet (Form 7b) is relied upon for size and width information. Second, it is almost universally true that salespersons at the conclusion of a sale have to make or register an entry of some sort whether the sale be cash or charge. Little additional time is required to write the stock number. Third, though in the Harvard System of Stock-keeping for Shoe Retailers errors in sales slip entries are somewhat less likely and less important, errors can nevertheless be minimized if attention is given to the matter and especially if a wrapper is employed (the wrapper may also be the cashier or the utility boy). If a bonus of fifteen cents a day is paid to each salesperson for each errorless day, each error discovered to represent one day's bonus, and if furthermore a bonus of five cents is paid to the wrapper for each error detected in copying on the sales slip, there will be a marked reduction in errors. This reduction in errors can be brought about at less expense than may commonly be supposed. Part of it may ultimately come in a reduction of PM's because of a cleaner stock. The records of bonuses received can be considered in raising salaries or in installing a different system of compensation.

The Bureau further recommends that the sales slips be in distinguishing colors according to the kind of shoes sold — men's, women's, children's, and others. These slips can be in groups in the same sales book; their use greatly facilitates the preliminary sorting of sales by the stock-keeper.

Although, if preferred, cards can be used for stock-keeping, the Harvard System of Stock-keeping for Shoe Retailers is in sheet form only and can be most conveniently used in loose-leaf binders. Some dealers may prefer to have separate binders for their men's and women's shoes respectively. The Sales Summary Sheets, one for each four weeks, thirteen for the year, would come first in the binder, followed by the

Consolidation Sheets. The Size-up Sheets of course will not be in these binders, except as those filled in are temporarily attached to the Consolidation Sheets. The Size-up Sheets, either in loose form or in blocks, will probably be most conveniently filled if they are attached to an ordinary clamp board. This furnishes a support, yet permits removal or change at will.

This stock-keeping system furnishes the retailer with records to guide his buying and to aid in obtaining a faster stock-turn. The Consolidation Sheet records show which styles, sizes, and widths have been most frequently demanded by his customers. By basing his orders at the beginning of a season on his previous experience, he can buy intelligently. During the season the Sales Summary Sheet shows constantly which stock numbers are moving and which, if any, are stagnant. Stocks of shoes which are not moving should be watched with especial care in order that they may be disposed of with as small a sacrifice as possible and in order that losses from depreciation may be checked. For styles, sizes, and widths which are in demand, the records on the Size-up Sheets and Order Records provide a necessary guide for replenishing his stock. By regulating his orders and his stock in accordance with these records a retailer can meet the requirements of his trade and at the same time insure a rapid stock-turn.

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